



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,812	04/24/2001	Wilhelmus Hendrikus Alfonsus Bruls	PHNL 000592	5832

24737 7590 07/02/2004

PHILIPS INTELLECTUAL PROPERTY & STANDARDS  
P.O. BOX 3001  
BRIARCLIFF MANOR, NY 10510

EXAMINER

WONG, ALLEN C

ART UNIT	PAPER NUMBER
----------	--------------

2613

DATE MAILED: 07/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/840,812

Applicant(s)

BRULS ET AL.

Examiner

Allen Wong

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 4/14/04 have been fully read and considered but they are not persuasive.

In regards to the last Office Action, the examiner intended to include a 35 U.S.C.101 rejection to claims 7-8 because a compressed signal needs to produced in a tangible body, machine readable, and be non-function descriptive material, meaning that a compressed signal needs to be produced by a method, apparatus, arrangement or system. So claims 7-8 need to be cancelled to overcome the 35 U.S.C. 101 rejection. See MPEP 706.03(a).

Claims 3 and 6 are still objected to as containing allowable subject matter.

In regards to lines 8-10 on page 2 of applicant's remarks, applicant asserts that Tanaka does not disclose the limitation "a second quantization parameter representing a second quality or bit rate that is lower than said first quality bit rate", as recited in claims 1, 4 and 7. The examiner respectfully disagrees. As written in the claims, the examiner has taken the broad context of the claim language and interpreted in such a manner that would still deem Tanaka as disclosing the aforementioned limitation above. Again, as stated before, Tanaka's element 118 of fig.3 is a second quantization parameter. Further, Tanaka's col.15, lines 40-53, Qstep is the second quality for quantization of selected second frames and that, on lines 43-48, the second quality Qstep is lower than the first quality Qb because the first quality Qb is multiplied by a factor  $1/4$  ,  $1/2$  or  $3/4$  , thus making the second quality Qstep smaller or lower than the

Art Unit: 2613

first quality Qb. So, Tanaka does disclose "a second quantization parameter representing a second quality or bit rate that is lower than said first quality bit rate".

Moreover, in column 5, line 64 to col.6, line 14, the purpose of Tanaka's invention is to calculate and use a second quantization step size to further improve picture quality, not degrade picture quality.

***Claim Rejections - 35 USC § 101***

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 7 and 8 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. In other words, a compressed signal needs to be produced in a tangible body, machine readable, and be non-function descriptive material, meaning that a compressed signal needs to be produced by a method, apparatus or system.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1, 2, 4, 5, and 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka (5,144,426).

Art Unit: 2613

Regarding claims 1 and 4, Tanaka discloses an arrangement and method of compressing a video signal (fig.3 is an encoding method and arrangement for compressing a video signal 101), the arrangement and method comprising:

predictively encoding (fig.3, elements 111 and 113) frames (fig.3, 101 are input video frames of video signal) of said video signal with reference to a prediction frame (fig.3, element 110);

calculating a quantization parameter for each encoded frame (fig.3, elements 118 and 122 calculates a quantization step size or parameter for each encoded frame),

quantizing the encoded frames in accordance with said quantization parameter (fig.3, element 115),

characterized in that said step of calculating the quantization parameter includes calculating a first quantization parameter (fig.3, element 122) representing a first quality or bit rate for quantizing selected first frames of said predictively encoded frames (col.15, ln.40-41; note the  $Q_b$  is the first quality for quantization of selected first frames), and a second quantization parameter (fig.3, element 118) representing a second quality or bit rate that is lower than said first quality or bit rate for quantizing selected second frames of the video signal (col.15, ln.40-53; note  $Q_{step}$  is the second quality for quantization of selected second frames and that, on lines 43-48, the second quality  $Q_{step}$  is lower than the first quality  $Q_b$  because the first quality  $Q_b$  is multiplied by a factor  $1/4$ ,  $1/2$  or  $3/4$ , thus making the second quality  $Q_{step}$  smaller or lower than the first quality  $Q_b$ ), the method further including:

decompressing (fig.3, element 126 is the local decoder or decompressor) the compressed second frames to constitute the prediction frame (fig.3, 110) for predictively encoding the first frames.

Regarding claims 2 and 5, Tanaka discloses an arrangement and method as claimed in claims 1 and 4, wherein the step of calculating the second quantization parameter includes calculating said first quantization parameter and multiplying said first quantization parameter by a given factor (col.15, ln.40-53; note  $Q_b$  is the first quality for quantization of selected first frames and  $Q_{step}$  is the second quality for quantization of selected second frames and that, on line 44, the second quality  $Q_{step}$  is lower than the first quality  $Q_b$  because the first quality  $Q_b$  is multiplied by a factor  $1/4$ , thus making the second quality  $Q_{step}$  smaller or lower than the first quality  $Q_b$ ).

Regarding claim 7, Tanaka discloses a compressed video signal, comprising:  
a prediction frame (fig.3, element 110),  
predictively encoded (fig.3, elements 111 and 113) frames (fig.3, 101 are input video frames of video signal) that have been predictively encoded with reference to the prediction frame (fig.3, element 110),

respective quantization parameters for respective encoded frames (fig.3, elements 118 and 122 calculates a quantization step size or parameter for each encoded frame), the encoded frames having been quantized (fig.3, element 115) in accordance with said respective quantization parameters, the quantization parameters including first quantization parameters (fig.3, element 122) representing a first quality or bit rate for quantizing selected first frames of said predictively encoded frames

Art Unit: 2613

(col.15, ln.40-41; note the  $Q_b$  is the first quality for quantization of selected first frames), and second quantization parameters (fig.3, element 118) representing a second quality or bit rate that is lower than said first quality or bit rate for quantizing selected second frames of the video signal (col.15, ln.40-53; note  $Q_{step}$  is the second quality for quantization of selected second frames and that, on lines 43-48, the second quality  $Q_{step}$  is lower than the first quality  $Q_b$  because the first quality  $Q_b$  is multiplied by a factor  $1/4$ ,  $1/2$  or  $3/4$ , thus making the second quality  $Q_{step}$  smaller or lower than the first quality  $Q_b$ ).

Regarding claim 8, Tanaka discloses a storage medium on which the compressed video signal of claim 7 has been stored (fig.3, element 123 is a storage medium that stores or records the compressed video signal).

Regarding claim 9, Tanaka discloses a method of transmitting or recording a video signal, the method comprising:

generating the compressed video signal of claim 7 (fig.3; see "Regarding claim 7"); and

transmitting or storing the compressed video signal (fig.3, element 135 is the transmission of the compressed video signal and element 123 stores the compressed video signal).

Regarding claim 10, Tanaka discloses an arrangement for transmitting or recording a video signal, the arrangement comprising:

means for generating the compressed video signal of claim 7 (fig.3; see "Regarding claim 7"); and

Art Unit: 2613

means for transmitting or recording the compressed video signal (fig.3, element 135 is the transmission of the compressed video signal and element 123 records the compressed video signal).

***Allowable Subject Matter***

3. Claims 3 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Tanaka discloses a motion compensated prediction interframe coding system. Kim discloses an adaptive quantizer with modification of high frequency coefficients. The prior art does not disclose, teach or suggest the limitation wherein said predictively encoded frames constitute a series of successive frames, the second selected frames being every other frame of said series. As illustrated in the applicant's figure 2B, the P' frame is the every other frame that alternates with the other frames (e.g. I or P), and clearly, neither Tanaka nor Kim teaches the second selected frames being every other frame of the series of successive frames.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (703) 306-5978. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (703) 305-4856. The fax phone



Art Unit: 2613

number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Allen Wong  
Examiner  
Art Unit 2613

AW  
6/30/04